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OC-0447-88

19 AUG 1988

MEMORANDUM FOR: Director of Information Technology

25X1 FROM: [REDACTED]

Director of Communications

25X1 SUBJECT: Facsimile Services [REDACTED]

1. As you know, there has been discussion between our staffs about facsimile services and the facilities needed to handle what is anticipated to be a rapidly growing service. We are all aware that the manual operation at Headquarters is operationally burdensome and will soon become unworkable. Facsimile is, however, only the most visible of a host of services that will require new efficiencies in transmission and distribution. The following paragraphs outline what we in the Office of Communications plan to do to resolve this matter. As a common problem, we would be interested in your views regarding this plan. Additionally, we ask that the Office of Information Technology identify a point of contact to work with us. [REDACTED]

2. We have concluded that the functional requirements for transporting facsimile traffic are much the same as for transporting narrative traffic, that is: store and forward, multi-addressing, audit trails, integrity, and operational requirements. It is our view that facsimile as well as other types of information (text, voice, imagery, or any arbitrary binary file) should be as transparent as possible to the network, not only at the packet level but in the message/data switches and Headquarters distribution facilities. That is to say, a fully integrated multi-media capability responsive to all data types is needed. Given that view, our approach is to fit these information handling capabilities into the network that we have, rather than build something that is unique. [REDACTED]

3. MERCURY provides an integrated facility at the packet level. Similarly, we believe the Message Relay Switch (MRS) can be enhanced to provide for switching facsimile and other data

CONFIDENTIAL

CONFIDENTIAL

25X1 SUBJECT: Facsimile Services 

files at Headquarters. In the case of facsimile, for example, the enhancements would include the capability to communicate with our RICOH 2112 facsimile unit, and provide store and forward capabilities for an arbitrary binary file. We are proceeding with the MERCURY contractor to do a preliminary design and implementation plan. This analysis will address functional, performance and capacity issues. The dissemination and archiving systems to be used with MRS must also be addressed; will MHF and ALLSTAR Upgrade handle these messages?

4. The MRS based solution must not interfere with current MRS activation schedule. This service will not be a near term solution to the requirement. Therefore, we are looking at some interim help in the form of off-the-shelf PC software. The RICOH IMAGENET/IMAGEMAIL package, which allows a PC to act as facsimile server, may be useful. We intend to evaluate that possibility.

5. We have also experimented with integrating facsimile and message services at the terminal level. This requires the facsimile unit to be coupled with a PC, which segments and converts facsimile data to a message format (and the reverse) and interfaces directly to message channels. Whereas this might be attractive in isolated situations where network access is a problem, there are too many unknowns regarding performance impact on the message network to make any major commitment to this approach. We do, however, see integrating facsimile and text, as well as other types of data, at the end user level as the proper target for the longer range solution. This would happen in conjunction with the evolution of CRAFT to DOLPHIN.

6. The functional development will require the expenditure of funds but the major financial impact will be the acquisition of sufficient computer resources to meet capacity and performance objectives. This may be accounted for in modifications to ongoing initiatives but also as budget issues related to ongoing maintenance/growth. This will have to be discussed further.

7. In summary: We intend to start the preliminary work for using MRS for facsimile switching requirements as well as the broader issue of the multi-media capability. Since an enhanced

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25X1 SUBJECT: Facsimile Services [REDACTED]

MRS is at least two years away, we will look for interim help in the form of off-the-shelf PC hardware and software. Our focal point for this effort is [REDACTED], Chief, Network Engineering Group, OC-ED and can be reached [REDACTED]

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